

Data sheet

# Kaowool™ board

ENGLISH

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## Description

**Kaowool™ 1260, Strong, 1400 and 1600 boards are produced from refractory fibre compositions specially developed to give rigid, self-supporting boards with excellent high temperature properties.**

Board is designed for use in applications requiring higher rigidity than blanket forms, and, as a result of its higher density, has improved thermal insulation properties and abrasion resistance.

Kaowool boards are obtained by vacuum forming process. The process allows the production of white boards in a wide dimensional choice, with an excellent homogeneity throughout the thickness which ease machining of the boards when needed. For a large need of standard ceramic fibre boards, please refer to our CERABOARD data sheet.

Strong Board is produced by the addition of selected refractory fillers to the ceramic fibre in order to improve its mechanical properties. Strong Board has two times the strength of 1260 Board, both when measured fired and unfired.

All Board formulations contain a small amount of organic binder to improve the cold handling strength and this burns out on first firing at approximately 200-300°C. Heat treatment can be made to burn the organic binders on special request.

## Type

Vacuum formed boards.  
Kaowool Board 1260  
Kaowool Strong Board 1260  
Kaowool Board 1400  
Kaowool Board 1600

## Classification temperature

From 1260°C up to 1600°C, depending on grade. Please refer to the datasheets of Alphawool for utilisation above this temperature.

The maximum continuous use temperature depends on the application. Please contact Morgan Advanced Materials, Thermal Ceramics for advice.

## Typical applications

### Iron and steel

- Expansion joints, back-up insulation, heat shields and mould base insulation

### Non-ferrous

- Tundish and launder covers in the casting of copper and copper-based alloys

### Ceramics

- Hot-face lining for kilns and in construction of LTM kiln cars

### Glass

- Back-up insulation in melting furnaces and protection of burners

### Furnace building

- Hot face lining material (alternative to blanket); back-up to solid refractories; expansion joints

### Light industry

- Lining combustion chambers in industrial and domestic boilers.

### Petrochemical

- High temperature heater lining hot-face material

## Benefits

- Rigid, self supporting boards.
- Low thermal conductivity.
- Good abrasion resistance.
- Low heat storage.
- Resistant to thermal shock.
- Not wetted by most molten non ferrous metals, including aluminium.
- Good resistance to spalling.
- Can be easily cut and shaped

SDS:  
EU: 104-9

## Data sheet

## Kaowool™ board

## Metric information

	Kaowool Board 1260	Kaowool Strong Board 1260	Kaowool Board 1400	Kaowool Board 1600
<b>Classification temperature, °C</b>	1260	1260	1400	1600
<b>Properties Measured at Ambient Conditions (23°C/50% RH)</b>				
<b>Colour</b>	white / tan	white / tan	white / tan	white / tan
<b>Density, kg/m<sup>3</sup></b>	280	330	260	320
<b>Modules of rupture, MPa</b>				
Unfired	1.4	2.7	0.99	0.4
Fired 15minutes @650°C	0.58	1.1	0.35	0.3
<b>Compressive strength, MPa</b>				
@5% reduction in thickness	-	0.56	-	-
<b>High Temperature Performance</b>				
<b>Loss on ignition, %</b>	5-7	5-7	5-7	5-7
<b>Thermal conductivity W/m.K , (ASTM C-201) at mean temperature of</b>				
@200°C	0.07	0.06	0.06	-
@400°C	0.09	0.09	0.08	0.08
@600°C	0.11	0.12	0.1	0.11
@800°C	0.15	0.16	0.13	0.14
@1000°C	-	-	0.18	0.16
@1200°C	-	-	0.23	0.19
@1400°C	-	-	-	0.25

**Availability and Packaging**

**Sheet size:** 1200 x 1000, 1000 x 1000, 1000 x 500mm.

**Thickness:** From 5 to 150 mm depending of the mix.

Other thicknesses and sheet sizes can be supplied to special order.

**Tolerances**

All boards are subject to our standard tolerances.

- Th 6 to 10 mm +/- 1 mm
- 15 +/- 1.5 mm
- Above 20 +/- 2 mm

However, special machining operations can be undertaken to improve these, if necessary. Boards, can be further toughened by the application of a hardening solution.

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**SUPERWOOL®** is a patented technology for high temperature insulation wools which have been developed to have a low bio persistence (information upon request). **SUPERWOOL®** products may be covered by one or more of the following patents, or their foreign equivalents:

**SUPERWOOL® PLUS** and **SUPERWOOL® HT** products are covered by patent numbers: US5714421 and US7470641, US7651965, US7875566, EP1544177 and EP1725503 respectively.

A list of foreign patent numbers is available upon request to Morgan Advanced Materials plc.

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